

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claims 1-29 (canceled)

Claim 30 (Previously presented) A golf ball comprising:

- (a) a core; and
- (b) a cover formed over said core by casting into a golf ball mold, that when cured at room temperature said cover has a Shore D hardness of 50D to 65D, the cover comprising:
  - (1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof;
  - (2) polyoxytetramethylene ether glycol having a molecular weight of about 650-3000 wherein the diisocyanate and the polyoxytetramethylene ether glycol when reacted into a prepolymer have an NCO% content by weight from 5.5% to 8.0% of the prepolymer; and,
  - (3) a curing agent blend consisting of:
    - (A) dimethylthio-2,4-toluenediamine; and,
    - (B) diethyl-2,4-toluenediamine.

Claim 31 (Canceled)

Claim 32 (Currently amended) The golf ball of claim 30 wherein the diisocyanate and the polyoxytetramethylene ether glycol form a prepolymer having an NCO content of about 6%, which when mixed with the curing agent ~~here~~ has a pot life of 55-70 seconds.

Claims 33-35 (Canceled)

Claim 36 (Previously presented) The golf ball of claim 30 wherein the core is comprised of cis polybutadiene rubber.

Claim 37 (Previously presented) The golf ball of claim 30 wherein the core comprises a center made from cis polybutadiene rubber and thread windings.

Claim 38 (Previously presented) The golf ball of claim 37 wherein the center has a diameter from about 1.40" to about 1.53".

Claim 39 (Canceled)

Claim 40 (Previously presented) A golf ball comprising:

a core, comprising a center and thread layer wherein the core has a diameter from about 1.48" to about 1.62"; and,

a polyurethane cover free of catalysts having a Shore D hardness of 50D to 65D formed from a mixture of reactants poured into at least one pair of mating mold halves, wherein the mixture of reactants produce a semi-gelled polyurethane, wherein the core is introduced into at least one of the pair of mating mold halves containing the semi-gelled polyurethane, which after waiting approximately four minutes is removed and cured at room temperature, wherein the reactants comprise:

- (a) (1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, isophorone diisocyanate and mixtures thereof, and
- (2) polyoxytetramethylene ether glycol having a molecular weight of about 650-3000; and,
- (b) a curing agent comprising:
  - (1) dimethylthio-2,4-toluenediamine; and,
  - (2) diethyl-2,4-toluenediamine.

Claim 41 (Canceled)

Claim 42 (Canceled)

Claim 43 (Currently amended) A polyurethane golf ball article comprising:

- a core;
- at least one pair of mating mold halves wherein the mold halves produce

finished golf balls;

a cast golf ball cover disposed over the core formed from a mixture poured into the pair of mating mold halves, the mixture when cured having a Shore D hardness of 50D to 65D wherein the mixture comprises a prepolymer of a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof and polyoxytetramethylene ether glycol that has an NCO content of 5.5% to 8.0% by weight and the prepolymer is combined with a curative comprising diethyl-2,4-toluenediamine and dimethylthio-2,4-toluenediamine, which are mixed and poured into the pair of mating mold halves forming a semi-gelled polyurethane, wherein the core is inserted into the semi-gelled polyurethane and the core is completely engulfed by the semi-gelled polyurethane when the pair of mating mold halves are joined.

Claim 44 (Previously presented) A cast polyurethane golf ball article comprising:

(a) a core; and

(b) a cover having a Shore D hardness of 50D to 65D after curing for 8 to 16 hours at room temperature, said cover being a polyurethane formed from a mixture of reactants comprising:

(1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, isophorone diisocyanate and mixtures thereof;

(2) polyoxytetramethylene ether glycol, wherein said polyol has a

molecular weight of about 650-3000; and,

(3) a curing agent comprising:

(A) dimethylthio-2,4-toluenediamine; and,

(B) diethyl-2,4-toluenediamine;

(c) at least one pair of mating mold halves wherein said mold halves produce finished golf balls, wherein the mixture of reactants is poured into the pair of mating mold halves the core is inserted engulfing the core in the mixture that is capable of being cured at room temperature after removal from the mating mold halves.

Claims 45-47 (Canceled)

Claim 48 (Previously presented) A golf ball comprising:

a core;

a cover comprising a blend of:

(a) a polyurethane prepolymer comprising:

(1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof;

(2) polyoxytetramethylene ether glycol;

(b) a curing agent comprising:

(1) dimethylthio-2,4-toluenediamine; and,

(2) diethyl-2,4-toluenediamine;

wherein the polyurethane prepolymer and curing agent are cured at about 72° F to about 102°F, and a post-cure time for the golf ball is between about 8 to 16 hours.

Claim 49 (Previously presented) The golf ball of claim 48 wherein said cover blend has a pot life of 55-70 seconds.

Claim 50-52 (Canceled)

Claim 53 (Previously presented) The golf ball of claim 48 wherein the core comprises a center and a thread winding layer, wherein the thread winding layer is sprayed with polyurethane.

Claim 54 (Previously presented) A golf ball having a cast polyurethane cover formed in a single golf ball mold, the golf ball comprising:

a core; and,

a cast polyurethane cover having a Shore D hardness of about 50D to 65D, the cover comprising a mixture of:

(a) a prepolymer comprising:

(1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof; and,

(2) polyoxytetramethylene ether glycol, wherein the diisocyanate

and the polyoxytetramethylene ether glycol have a 5.5% to 8.0% by weight of an NCO% content when reacted as a prepolymer;

(b) a curing agent blend comprising:

- (1) dimethylthio-2,4-toluenediamine;
- (2) diethyl-2,4-toluenediamine;

wherein said mixture has a pot life of about 55 to 70 seconds, and cures in about 8 to 16 hours at a temperature of about 72F to 102F degrees.

Claim 55 (Previously presented) A golf ball comprising:

a core having a diameter of about 1.48" to 1.62";

a polyurethane cover comprising:

(a) a prepolymer comprising:

- (1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof;
- (2) polyoxytetramethylene ether glycol;

(b) a curing agent blend consisting essentially of

- (1) diethyl-2,4-toluenediamine; and,
- (2) dimethylthio-2,4-toluenediamine.

Claim 56 (Previously presented) The golf ball according to claim 55, wherein the polyurethane cover cures in about 8 to 16 hours at a temperature of 72F to 102F degrees.

Claim 57 (Previously presented) The golf ball according to claim 55, wherein the polyurethane cover further comprises titanium dioxide, UV stabilizer and optical brighteners.

Claim 58 (Previously presented) A golf ball comprising:

a core;

a cover comprising a blend of:

a polyurethane produced in a one-shot process comprising:

- (1) a diisocyanate selected from the group consisting of toluene diisocyanate, 4, 4'-diphenylmethane diisocyanate; isophorone diisocyanate and mixtures thereof;
- (2) polyoxytetramethylene ether glycol;
- (3) a curing agent blend comprising:  
dimethylthio-2,4-toluenediamine; and,  
diethyl-2,4-toluenediamine;

wherein the polyurethane is cured at about 72° F to about 102°F, and a post-cure time for the golf ball is between about 8 to 16 hours.